

● Profiles of researchers in sustainability science

Laurence Maurice,
IRD, UMR Geosciences Environment Toulouse, France
Rodolphe Devillers,
IRD, UMR Espace-Dev, Montpellier,
France Chairs of IRD competition juries
Directors and research fellows in sustainability science

Background

IRD's science policy aims to strengthen the Institute's role in the development of useful, ethical and effective research to achieve the Sustainable Development Goals (SDGs). Recruiting young researchers as well as senior researchers in sustainability science is strategic for this policy to be sustainable. The aim of this recruitment policy is to encourage interaction between disciplines and to promote new ways of working together around common, problem-centred issues to tackle the social and environmental crises that affect the countries of the Global South in particular.

Contacts

laurence.maurice@ird.fr
rodolphe.devillers@ird.fr

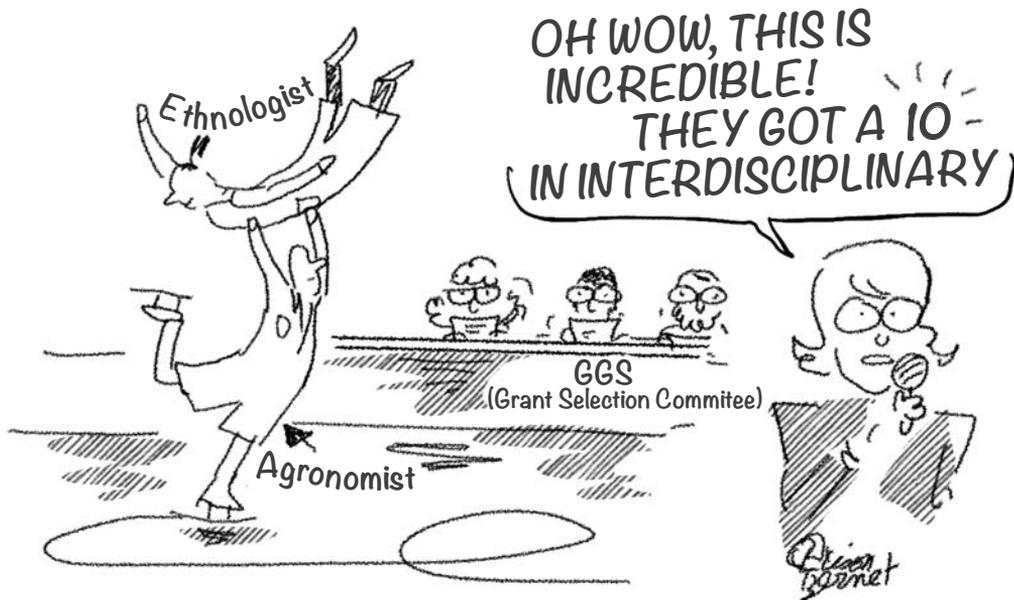
Further reading

<https://www.ird.fr/concours-chercheurs>

Responding to today's major challenges

The current health crisis, like those of the climate, biodiversity or the global crises resulting from human activities, has forced us to rethink the role that research and researchers play in the development of solutions aimed at fairer and more sustainable development. Research has become ultra-competitive internationally, with highly selective and largely discipline-based recruitment processes that also focus on excellence in research and how research is used within the international scientific community.

This competition demands creativity, innovation, originality and, of course, conviction and perseverance from researchers when submitting their applications and research projects to recruitment bodies. Today, however, they need to think differently and apply their skills at an international level and in an interdisciplinary way in order to eventually develop models and scenarios based on excellent scientific data. These initiatives must involve society's stakeholders right from the design phase of research projects and in the co-construction of fair, sustainable and responsible solutions (participatory research approach with stakeholders).



Interdisciplinarity and sustainability science (drawing by Lison Bernet).

What kind of training should sustainability science researchers receive?

Sustainability science, by its very nature, requires an approach that transcends disciplinary and sectoral boundaries. Traditionally, interdisciplinarity is the result of collaboration between disciplinary experts on the same project, but it is important for researchers recruited to sustainability science positions to be able to step outside their disciplinary field and become part of interdisciplinary or even transdisciplinary teams (also co-constructed with non-academic stakeholders). This requires, for example, familiarity with scientific literature and research methods used by disciplines other than their own. Such experience may be the result of training that is itself interdisciplinary (e.g. a Master's degree in resource management or sustainable development), attendance at summer schools or even training in sustainability science. However, a profile of this kind is more often the result of a combination of disciplinary training and opportunities for collaboration in interdisciplinary projects. In this context, candidates with expertise in very different research fields (e.g. life and Earth sciences and social sciences) will be in a better position to undertake work in sustainability science.

Profiles sought

Future researchers in sustainability science will first have to meet the usual criteria for competitions, not only in terms of publications and other

research achievements, but also in terms of supervision and teaching, scientific leadership, and so on. Candidates wishing to join IRD will also have to demonstrate either experience of collaborating with countries in the Global South, or the desire and potential to do so. Candidates' ability to collaborate with non-academic stakeholders (i.e. to engage in transdisciplinarity) and to integrate thinking on the co-construction of fair and sustainable solutions into their work will be particularly sought after. However, apart from these common criteria, candidates must also show that they have genuine experience in interdisciplinarity (through their training, thesis work, postdocs, projects, etc.), which ideally has led to publications or other outputs that are also interdisciplinary, integrating if possible very disparate fields, such as life and Earth sciences and social sciences and humanities. A candidate who presents a project in sustainability science, but who has only published work in one discipline, will have more trouble winning over a recruitment panel than a candidate who has already published in sustainability science or in a truly interdisciplinary context. Candidates with a particular interest in complex and multi-scale issues, integrating sustainability science as an object of research, will be particularly well suited to these positions. To ensure that they assess candidates fairly, recruitment panels, themselves interdisciplinary, must listen respectfully to the candidates and to each other to ensure that they strike the right balance between the various scientific cultures, particularly in terms of how research work is presented or methodological issues are addressed.

One of the “sustainability science” profiles selected in 2021 was that of a researcher whose work focuses on the implementation of collaborative environmental governance, adopting a geographical, systemic and reflexive approach to socio-ecological systems, and playing a twin role of analyst and coach.

Another project, carried out in the foothills of volcanoes and at the crossroads between geology and health, focused on diagnosing and preventing the emergence of pathologies affecting populations exposed to volcanic soils on a daily basis, representing a major toxicity risk for their health.

KEY POINTS

Since 2020, IRD has created positions for researchers in sustainability science with the aim of reinforcing the shift in its focus. Researchers applying for these positions must be fully committed to the importance of a transdisciplinary approach to research on issues in the South, in an overall context of climate change, ecological and energy crises, and social and territorial inequalities. Candidates for these positions must not only have strong research profiles but must also have solid experience of working in an interdisciplinary setting and be aligned with sustainability science. It is also essential that they know how to engage and interact not only with other disciplines, particularly life and Earth sciences and social sciences and humanities, but also with non-academic stakeholders, the private sector and civil society, as well as with policymakers and other public-sector stakeholders.

SUSTAINABILITY SCIENCE

UNDERSTAND, CO-CONSTRUCT, TRANSFORM

Collective thinking coordinated
by Olivier Dangles and Claire Fréour

French National Research Institute for Sustainable Development
Marseille, 2023

Peer review board

Valérie Verdier, IRD Chairman and Chief Executive Officer

Corinne Brunon-Meunier, Deputy General Director

Isabelle Benoist, General Secretary

Philippe Charvis, Deputy Director of Science

Marie-Lise Sabrié, Director of the Scientific and Technological Culture Mission

Cover photo: Rock painting, Cueva de las Manos, Argentina.

© IRD/O. Dangles – F. Nowicki/*Une Autre Terre*

Photo p. 14: “Understand”: Survey work, Kenya.

© IRD/S. Duvail

Photo p. 40-41: Observation and sampling, Burkina Faso.

© IRD/M. Barro

Photo p. 62: “Co-construct”: Participatory mapping workshop on coastal cultural heritage, Marquesas Islands.

© IRD/P. Ottino

Photo p. 88-89: Participatory work with local people, Madagascar.

© IRD/M. Léopold

Photo p. 110: “Transform”: Schoolchildren’s fresco on the theme of the Pachamama, Ecuador.

© IRD-CNRS/S. Desprats Bologna

Photo p. 136-137: Children playing on a beach in Salango, Ecuador.

© IRD/O. Dangles – F. Nowicki/*Une Autre Terre*

Editorial coordinators: Corinne Lavagne and Marie-Laure Portal-Cabanel

Cover, design and layout: Charlotte Devanz

IRD, Marseille, 2023